a timing error estimator operable to obtain said timing difference between said tested timing and said reference timing; and

a clock skew calculator operable to obtain said clock skew between said plurality of clock signals to be measured from said timing difference obtained for each of said plurality of clock signals to be measured.

97 7. A clock skew measuring apparatus as claimed in claim 5, wherein said timing estimator obtains a riding edge timing or a falling edge timing of each of said reference signal and said plurality of clock signals to be measured.

8. A clock skew measuring apparatus as claimed in claim 5, wherein said timing estimator includes:

an analytic signal transformer operable to transform each of said plurality of clock signals to be measured into a complex analytic signal;

an instantaneous phase estimator operable to obtain an instantaneous phase of said analytic signal;

a linear instantaneous phase estimator operable to obtain a linear instantaneous phase of each of said plurality of clock signals to be measured based on said instantaneous phase obtained; and

an initial phase estimator operable to obtain an ideal edge timing of each of said plurality of clock signals to be measured by obtaining an initial phase angle of said linear instantaneous phase.

98 13. A clock skew measuring apparatus as claimed in claim 1, wherein said clock skew estimator includes an analog-to-digital converter operable to receive said reference signal and each of said clock signals to be measured and to digitize said reference signal and said each of said clock signals to be measured.

14. A clock skew measuring apparatus as claimed in claim 1, wherein said clock skew estimator includes a waveform clipper operable to receive said reference signal and each of said clock signals to be measured and to remove amplitude modulation components of said

received clock signal to be measured to extract phase modulation components of said received clock signal.

99 20. A clock skew measuring method as claimed in claim 17, wherein said clock skew estimating step measures a deterministic component of said clock skew between said plurality of clock signals to be measured.

21. A clock skew measuring method as claimed in claim 17, wherein said clock skew estimating step measures a random component of said clock skew between said plurality of clock signals to be measured.

22. A clock skew measuring method as claimed in claim 17, wherein said clock skew estimating step includes:

obtaining an edge timing of said reference signal as a reference timing;

obtaining an edge timing of each of said plurality of clock signals to be measured as a tested timing;

obtaining said timing difference between said tested timing and said reference timing; and

obtaining said clock skew between said plurality of clock signals to be measured from said timing difference obtained for each of said plurality of clock signals to be measured.

910 24. A clock skew measuring method as claimed in claim 22, wherein said obtaining of edge timing obtains a rising edge timing or a falling edge timing of each of said reference signal and said plurality of clock signals to be measured.

25. A clock skew measuring method as claimed in claim 22, wherein said timing estimating includes:

transforming each of said plurality of clock signals to be measured into a complex analytic signal;

obtaining an instantaneous phase of said analytic signal;